

## Illumination system and display device including such a system.

Patent Number: EP0606939

Publication date: 1994-07-20

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Requested Patent:  EP0606939, B1

Application

Number: EP19940200023 19940106

Priority Number(s): EP19940200023 19940106; EP19930200056 19930111

IPC Classification: G02F1/1335; G02F1/00; H04N9/31; G02B5/30

EC Classification: H04N5/66, H04N9/30, F21V9/14, G02B5/30L, G02F1/1335P5, G02F1/13357P, H04N9/31V

Equivalents:

Cited Documents: EP0407830; EP0492636; US5161041; EP0337555; JP63168626

### Abstract

The invention relates to a display device (1) having a transmission display panel (3) and an illumination system (11) which comprises a radiation source (13) and a diffuser (17). To achieve a high polarization conversion, a cholesteric filter (19) is arranged between the radiation source (13) and the display panel (3), which filter transmits radiation having the desired state of polarization in a wavelength range which is at least equal to the full visible wavelength range. A reflector (15) is further arranged opposite a diffuser side remote from the filter, which reflector reflects radiation reflected by the filter (19) back to the filter, which radiation is

depolarized in the diffuser (17). 

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